I: Gordon E-4, 5 (no date) 1907 AR? Khasi AR?

Khasi Hills	... ...	117
Jaintiapur	... ...	69
Total	... ...	4,081*

The following information regarding the general aspect of the Khasi and Jaintia Hills district, with some additions, is derived from Sir William Hunter's Statistical Account of Assam. The district consists almost entirely of hills, only a very small portion lying in the plains. The slope of the hills on the southern side is very steep until a table-land is met with at an elevation of about 4,000 feet at Cherrapunji. Higher up there is another plateau at Mawphlang. This is the highest portion of the hills, some villages being found at as high an elevation as close on 6,000 feet above sea level. Fifteen miles to the east of Mawphlang, and in the same range, is situated the civil station of Shillong, at an average elevation of about 4,900 feet. The elevation of the Shillong Peak, the highest hill in the district, is 6,450 feet above sea level. On the northern side of the hills are two plateaux, one between 1,000 and 2,000 feet below the level of Shillong, and another at an elevation of about 2,000 feet above sea level. In general features all these plateaux are much alike, and consist of a succession of undulating downs, broken here and there by the valleys of the larger hill streams. In the higher ranges, where the hills have been denuded of forest, the country is covered with short grass, which becomes longer and more rank in the lower elevations. This denudation of forest has been largely due to the wood being used by the Khasis for fuel for iron smelting in days gone by. The Government, however, has taken steps to protect the remaining forests from further spoliation. A remarkable feature is the presence of numerous sacred groves situated generally just below the crests of the hills. In these woods are to be found principally oak and rhododendron trees. The fir-tree (Pinus Khasia) is first met with on the road from Gauhati to Shillong, at Umming, at an elevation of about 1,500 feet. In the neighbourhood of Shillong the fir grows profusely, but the finest fir-trees are to be seen

* The figures for Khasi population in the Khasi and Jaintia Hills district will be found under "Statistics."

1:Gordon E-4, 9 (no date) 1907 AR? Khasi AR?

137 in the Jowai sub-division. In the vicinity of Nongpoh is observed the beautiful saloo or sapuvee, the iron-wood tree. The latter is also to be found on the southern slopes of the hills in the Jowai sub-division. There are some sal forests to the west and south of Nongpoh, where the sal trees are almost as large as those to be found in the Garo Hills. Between Shillong and Jowai there are forests of oak, the country being beautifully wooded. Chestnuts and birches are also fairly common. The low hills on the northern and western sides of the district are clad with dense forests of bamboo, of which there are many varieties. The Tendrette or screw-pine is to
138 be met with on the southern slopes. Regarding the geological
139 formation of the hills, I extract a few general remarks from the Physical and Political Geography of Assam. The Shillong plateau consists of a great mass of gneiss, bare on the northern border, where it is broken into hills, for the most part low and very irregular in outline, with numerous outliers in the Lower Assam Valley, even close up to the Himalayas. In the central region the gneiss is covered by transition or sub-metamorphic rocks, consisting of a strong band of quartzites overlying a mass of earthy schists. In the very centre of the range, where the table-land attains its highest elevation, great masses of syenitic diorite and granitic stone; and the latter is found in dykes piercing the gneiss and sub-metamorphic series throughout the southern half of the boundary of the plain. To the south, in contact with the gneiss and sub-metamorphics is a great volcanic outburst of trap, which is stratified, and is brought to the surface with the general rise of elevation along the face of the hills between Shella and Therieghat south of Cherrapunji. This has been described as the "sylhet trap." South of the main axis of this metamorphic and volcanic zone are to be found strata of two well defined series; (1) the cretaceous, and (2) nummulitic. The cretaceous contains several important coalfields. The nummulitic series, which overlies the cretaceous, attains a thickness of 3000 feet in the Therria river, consisting of alternating strata of compact limestones and sandstones. It is at the exposures of these rocks on their downward dip to the south of the plateau that are situated the extensive limestone quarries of the Khasi Hills. There are numerous

I: Gordon E-4, 9 (no date) 1907 AR? Khasi AR?

limestone caves and underground water-courses on the southern face of the hills. This series contains coal-beds, e.g. the Cherrapunji and that at Lakadong in the Jaintia Hills. Some description of the remarkable Kylleng Rock may not be out of place. Sir Joseph Hooker describes it as a dome of red granite, 3,600 feet above sea level, accessible from the north and east, but almost perpendicular to the southward where the slope is 80° for 600 feet. The elevation is said by Hooker to be 400 feet above the mean level of the surrounding ridges and 700 feet above the bottom of the valleys. The south or steepest side is encumbered with enormous detached blocks, while the north is clothed with forests containing red tree-rhododendrons and oaks. Hooker says that on its skirts grows a "white bushy rhododendron" which he found nowhere else. There is, however, a specimen of it now in the Shillong Lake garden. Numerous orchids are to be found in the Kylleng wood, notably a beautiful white one, called by the Khasis *khlor kyllang synrai*, which blooms in the autumn. The view from the top of the rock is very extensive, especially towards the north, where a magnificent panorama of the Himalayas is obtained in the autumn. The most remarkable phenomenon of any kind in the country is undoubtedly the enormous quantity of rain which falls at Cherrapunji.* Practically the whole of the rainfall occurs in the rains, i.e. from May to October. The remainder of the district is less rainy. The climate of the central plateau of the Shillong range is very salubrious, but the low hills in parts of the district are unhealthy. The effect of the different climates can at once be seen by examining the physique of the inhabitants. The Khasis who live in the high central plateaux are exceptionally healthy and strong, but those who live in the unhealthy "Bhoi country" to the north, and in the Lyngngam portion to the west of the district, are often stunted and sickly. Not so, however, the Wars who live on the southern slopes, for although their country is very hot at certain times of the year, it does not appear to be abnormally unhealthy except in certain

* The average rainfall at the Cherrapunji Police Station during the last seventy years, from figures obtained from the office of the Director of Land Records and Agriculture, has been 425 inches. The greatest rainfall registered in any one year during the period was in 1861, when it amounted to 721 inches.

I: Gurdon E-4, 5 (no date) 1907 AR7 Khasi AR7

extracted by squeezing the comb with the hand. Wax is obtained by placing the comb in boiling water and allowing it to cool, when the wax floats to the surface. The Khasis do not systematically tend their bees, as they do not understand how to prevent swarming, and as the Khasi bee is a prolific creature, hives become weak very soon and a new hive has to be started from a captured natural swarm. The villages in which bees are regularly kept to any large extent in the Khasi and Jaintia Hills are Thied-dieng, Mawphon, Nongwar, Mawlong, Pynter, Tyrna, and Kongthong, but most of the War villagers rear bees and sell the honey at the neighbouring markets. The collection of the honey of the wild bee, or u lyrsi, is a hazardous occupation, the services of some six or seven persons being required, as the combs of this bee are generally built in the crevices of precipitous rocks, and sometimes weigh more than half a maund each. When such hives are discovered the bees are driven out by the smoke of a smouldering fire lit at the foot of the rock below the hive. Two or three men get to the top of the precipice, bearing two or three of their companions at the base. One of the men on the top of the rock is then lowered down in a sling tied to a strong rope, which is made fast by his companions above to a tree or boulder. The man in the sling is supplied with material to light a torch which gives out a thick smoke, with the aid of which the bees are expelled. The man then cuts out the comb, which he places in a leather bucket or bag, which, when filled, he lowers down to the persons in waiting at the foot of the rock. The wild honey may be distinguished from that of the domestic bee by being of a reddish colour. Honey from the last-mentioned bee is gathered twice or thrice in the year, once in the autumn and once or twice in the spring; that gathered in early spring is not so matured as that collected in autumn. The flora of the Khasi Hills being so numerous, there is no necessity for providing bees with artificial food. The bees are generally able to obtain their sustenance from clover, ammonias, "golden rod," bush honeysuckle, and numerous shrubs such as rudbeckia, daphne, &c., which abound about Shillong. There seem to be facilities for apiculture on a large scale in these hills, and certainly the honey which is brought round by the Khasis for sale in

I: Gurdon E-4, 5 (no date) 1907 AR7 Khasi AR7

work is done. In order to ascend to a Bhoi house, you have to climb up a notched pole. The Bhois sacrifice a he-goat and a fowl to *Kit-laphlang* (Khasi, *Kmieve thaw*), the household god, when they build a new house.

VILLAGES.

Unlike the Nagas and Kukis, the Khasis do not build their villages on the extreme summits of hills, but a little below the tops, generally in small depressions, in order to obtain some protection from the strong winds and storms which prevail in these hills at certain times of the year. According to the late U' *Soolom* Roy, it is *easy*, or taboo, to the Khasis to build a house on the last eminence of a range of hills, this custom having perhaps arisen owing to the necessity of locating villages with reference to their defence against an enemy. Khasis build their houses fairly close together, but not so close as houses in the Bhoi and Lyngngam villages. Khasis seldom change the sites of their villages, to which they are very much attached, where, as a rule, the family tombs are standing and the *maiñbyrsas* or memorial stones. In many villages stone monoliths and memorial stones are to be seen which from their appearance show that the villages have been there for many generations. During the Jaintia rebellion the village of *Jowai* was almost entirely destroyed, but as soon as the rebellion was over the people returned to the old site and rebuilt their village. Similarly, after the earthquake, the ancient village sites were not abandoned in many cases, but the people rebuilt their houses in their former positions, although in Shillong and Cherrapunji they rebuilt the walls of the houses of wooden materials instead of stone. There is no such thing as a specially reserved area in the village for the Siem and the nobility, all the people, rich or poor, living together in one village, their houses being scattered about indiscriminately. To the democratic Khasi the idea of the Siem living apart from his people would be repugnant. In the vicinity of the Khasi village, often just below the brow of the hill on the leeward side, are to be seen dark woods of oak

9:Gurdon E-4, 5 (no date) 1907 AR7 Khasi AR7

and other trees. These are the sacred groves. Here the villagers worship *U ryngkew U hass*, the tutelary deity of the village. These groves are taboo, and it is an offence to cut trees therein for any purpose other than for performing funeral obsequies. The groves are generally not more than a few hundred yards away from the villages. The villages of the Syntengs are similar in character to those of the Khasis. The Wár villages nestle on the hill-sides of the southern border, and are to be seen peeping out from the green foliage with which the southern slopes are clad. In the vicinity of, and actually up to the houses, in the Wár villages, are to be observed large groves of areca-nut, often twined with the *pan* creeper, and of plantain trees, which much enhance the beauty of the scene. Looking at a Wár village from a distance, a darker shade of green is seen; this denotes the limits of the extensive groves where the justly celebrated Khasi orange is grown, which is the source of so much profit to these people. The houses in the Wár villages are generally closer together than those of the Khasis, probably owing to space being limited, and to the villages being located on the slopes of hills. Generally up the narrow village street, and from house to house, there are rough steep stone steps, the upper portion of a village being frequently situated at as high an elevation as 200 to 300 ft. above the lower. In a convenient spot in a Wár village a clear space is to be seen neatly swept and kept free from weeds, and surrounded with a stone wall, where the village tribunals sit, and the elders meet in solemn conclave. Dances also are held here on festive occasions. At Nongjri village there is a fine rubber tree, under whose hollow trunk there are certain sacred stones where the priest performs the village ceremonies.

The Bhoi and Lyngam villages are built in small clearings in the forest, the houses are close together and are built often in parallel lines, a fairly broad space being reserved between the lines of houses to serve as a street. One misses the pretty gardens of the Wár villages, for Bhois and Lyngams attempt nothing of the sort, probably because, unlike the Khasi, a Bhoi or Lyngam village never remains more than two or three years in one spot; generally the villages of these people are in the vicinity of the forest clearings, sometimes actually in the midst

I: Gurdon E-4, 5 (no date) 1907 AR7 Khasi AR7

mould. The plant is watered by means of small bamboo aqueducts which are constructed along the hill-sides, the water being conducted along them often considerable distances. As in the plains, the leaves of the *pán* creeper are collected throughout the year.

The bay leaf (*in tarpát*, or *tezpát*) is classified in the *Agricultural Bulletin* as *Cinnamomum tamala*, and there is a note in the column of remarks that "this tree, as well as one or two others of the same genus, yields two distinct products, *tezpát* (bay leaf) and cinnamon bark." The bay leaf is gathered for export from the extensive gardens in Maharam, Malaiedhuat, Mawsynram, and other Khasi States. The plants are raised from seed, although there are no regular nurseries, the young seedlings being transplanted from the jungle, where they have germinated, to regular gardens. Bay leaf gardens are cleared of jungle and weeds periodically; otherwise no care is taken of them. The leaf-gathering season is from November to March. The leaves are allowed to dry for a day or two in the sun, and then packed in large baskets for export. The gathering of bay leaf begins when the trees are about four years old.

The following are the other minor crops which are grown in the Khasi and Jaintia Hills:—

Pineapples, turmeric, ginger, pumpkins and gourds, the egg plant, chillies, sesamum, and a little sugar-cane. The arum* (*in Mirie*) is also extensively grown in the hills, and forms one of the principal articles of food amongst the poorer classes; it is generally raised in rotation with potatoes, or is planted along with Job's tears. The stem of the arum is sometimes used as a vegetable, also for feeding pigs.

In the *Jowai* Sub-Division, notably at Nartiang, there are fairly good mangoes, which are more free from worms than those grown in the plains of Assam.

The Bhois and Lyngams cultivate lac. They plant seker *dal*, a *landon*, in their fields, and rear the lac insect on this plant. Last year the price of lac at Gauhati and Palasbari markets rose as high as Rs. 50 per maund of 82 lbs., it is said, but the price at the outlying markets of Singra and Boko was

* Colocasia esculenta, Schott, Encha.

2 [i.e., the pán ... Ans. 2]

I: Gurdon E-4, 5 (no date) 1907 AR7 Khasi AR7

the War country, it will be necessary to describe the land tenures and laws regarding land of each of these divisions separately. As land is always jhumed by the Bhois and Lyngams from year to year, customs regarding land with these people are naturally very simple. Taking land in the high plateau of the Khasi Hills first:—The lands are classified under two main divisions, (a) public and (b) private lands. The following are the different descriptions of lands in the first division:—

Ka ri Raj, or *ka ri Siem*, which are Siem's, or Crown lands. These lands are intended for the support of the Siem family, and they cannot be alienated. The Siems are, however, precluded by custom from levying a land tax on persons who cultivate such lands, the relation of landlord and tenant between the latter and their chiefs being unknown.

Ka ri Lyngdoh.—These lands are for the support of the Lyngdohs or priests of the State. In some Siemships, as in Mawiang Siemship, paddy is grown on these lands from which rice is obtained for the State puja.

Ri shnong, or village lands.—These lands are set apart to provide a supply of firewood, thatching grass, &c., and are the property of the village. The inhabitants of other villages are not allowed to enjoy the produce of such lands. Such lands can be cultivated by eyots of the village, but the latter possess only occupancy rights, and cannot transfer them.

Ri law kyntang.—These are sacred groves, situated generally near the summit of hills, composed of oak and rhododendron trees, which are held sacred (*kyntang*), it being an offence, or *sniap*, for any one to cut timber in the grove, except for cremation purposes. These groves are the property of the village.

(*b*) Private Lands. These may be subdivided into *ri-kur*, or lands which are the property of the clan, and *ri kpoh*, or acquired landed property. In the Khasi Hills proper a very large proportion, certainly of the high lands, is the property of the clan; for instance, the high lands at Laitkor, which are the property of the Khar kmyor and Kur kalong clans, whose ancestors the large memorial stones close to the Laitkor road commemorate, also the lands of the Tlang Khar clan, and many others.

10:Clarke U-3 (no date)1874 AR7 Khasi AR7

patches of open forest, and with scattered fir trees and oaks. Though south of the Himalaya range the character of the country is more like that found in the Himalayas at 4,000 feet higher elevation, and many plants, never collected in the Himalayas below 9,000 feet above sea-level, are found in the Khasi Hills between 4,500—6,000 feet. In this marvellous plateau the sub-alpine and the sub-tropical forms overlap; at the very foot of elegant palms may be gathered the identical stag's horn moss, which, in Britain, is found only on mountains. On a fir tree much resembling a scraggy Scotch-fir is seen growing the Vanda coerulea, the king of epiphytic orchids; a gnarled oak will carry a gigantic tropical liane; the painted lady and many other British species of lepidoptera will be accompanied by gorgeous tropical papilios and by window moths eleven inches across the wing; the cuckoo and Himalayan pheasant are above, while the tiger, the wild elephant and the green python are below. Justly has Dr. Hooker observed, "I know no spot in the world more calculated to fascinate the naturalist who, while appreciating the elements of which a landscape is composed, is also keenly alive to the beauty and grandeur of tropical scenery."

2. Almost throughout Khasi-land, and in a less degree through the Jaintea country, monumental stones are common. They are numerous in villages in the valleys, but are specially prominent, and sometimes of gigantic size, scattered over the rounded hill-tops where they form a feature in the landscape. In all modern treatises of Archæology and Anthropology the study of monumental stones forms an important chapter. Monuments of a remarkable similarity in design are found alike in Europe, Asia, and isolated islands in the Pacific Ocean, and these are in general of such extreme antiquity that they are treated as belonging to the prehistoric age. The Khasi stone monuments have attracted already much attention; first because of their great number and size; and, secondly and chiefly, because on these hills the erection of these monuments is now in full practice. It is reasonably supposed that a careful study of the Khasi method of raising the stones, and of the traditions or customs in accordance with which they raise them, may throw some light upon more ancient monuments of the same kind, even upon Stonehenge. It has been proposed to send out a commission from England to survey these Khasi stone monuments. They are described by Dr. Hooker, in his work (Him. Journ. II. 276), also by Colonel Yule in the *Calcutta Review*, and some account has been lately given by Major Godwin-Austen in the "Journal of the Anthropological Institute," No. 2. Oct. 1871.[1] The present memoir was written

[1] [illegible] not been published for this title. —Ed.]

15: Nakane E-5 (1955-1956) 1967 AR? Khasi AR?

CHAPTER I

INTRODUCTION

The homeland of the Khasi is the hilly country situated in the northeast of India and known at present as the District of United Khasi and Jaintia Hills, under the Assam State Government. The area is bounded by the plains of the Kamrup and the Nowgong Districts to the north, by the Cachar Hills and East Pakistan (District of Sylhet) to the south, and by the United Mikir and North Cachar Hills Districts to the east. The Khasi and Jaintia Hills are divided politically into two subdivisions, with headquarters at Shillong for the Khasi Hills, and at Jowai for the Jaintia Hills, respectively. The peoples of both subdivisions are called "Khasi" in a broad sense, and are distinctly marked off from other neighbouring tribes and peoples by language and social structure. The population of the Khasi in the District is 363,706 (*Census of India, 1951, Assam*). Their language belongs to one of the Mon group of the Austro-Asiatic family to which the Mundas in central India also belongs.[1]

Though all Khasis share fundamentally the same language and social structure, their cultures, dialects, economy, social usage, and political organization vary greatly, owing to the ecological and politico-historical differences among them. The United Khasi and Jaintia Hills are much higher than the neighbouring Garo Hills. The plateau of the Khasi Hills ranges from about 5,000 feet to 6,000 feet, of which

1. *The Census of India, 1951, Assam*, makes the following remarks on their language: "Three sources unknown have been discovered to be the Palaungs, a tribe inhabiting one of the Shan States to the northeast of Mandalay on the middle Salween. Later the relationship of the Khasi language has been traced not only to the Mon-Khmer language, but also to the Nicobarese and several dialects spoken by some tribes in the Malay Peninsula. In Assam, this special form of speech is only found in the Khasi and Jaintias while nearly all the other primitive languages with which it is surrounded belong to the great Boda family. The Khasi language is the only member of the Mon-Khmer family which possesses a grammatical gender distinguishing all nouns as masculine and feminine, and here also the feminine nouns immensely preponderate."

[P. 95]

15: Nakane E-9 (1955-1956) 1967 AR7 Khasi AR7

the highest point is the Shillong Peak, 6,445 feet, covered with scrub, grassland and forests (mostly oak, rhododendron and pine trees). The Jaintia Hills are considerably lower, with much flat land; wet paddy cultivation is practised here and there where sufficient water is available. From the plateau of the Khasi Hills northwards to the Assam Brahmaputra Valley there is a gentle slope covered with thick jungle, and the southern slope towards the Bengal plain is very steep, so that

MAP 9. — *Map of the Khasi-Jaintia Hills with Classification of Groups.*

the upland remained practically cut off from the plains until the middle of the 19th century.

Following the geographical and ecological differences, the five groups are segregated into fairly well-defined cultural areas, each developing a different economy and dialect:

1. The Jaintia[1] — associated mostly with wet rice cultivation.
2. The Khasi (upland Khasi) — practise potato cultivation with small-scale rice and maize cultivation.
3. The War — inhabit the southern slope of the Khasi and Jaintia Hills (they are called geographically the Khasi War and the Jaintia War). Due to the heavy rainfall, the soil is the most fertile in the Khasi and Jaintia Hills. The Khasi War practise jhuming of which the main yield is millet. In the lower part of this area, betel-leaf, betel-nut, and orange gardens are cultivated. The Jaintia War practise wet rice cultivation like most of the Jaintias, as well as betel-leaf cultivation.

1. They are called also the Synteng or the Pnar.

15: Nakane E-5 (1955-1956) 1967 AR7 Khasi AR7

137 178 244

Besides these political and religious changes, there have been very important changes in Khasi economy, particularly by the spread of potato cultivation. Potatoes were first introduced into the Hills in 1830 by Mr. David Scott. Since then, the upland Khasi Hills have been completely planted with potatoes. This grassland seems to be very easily adapted to potato cultivation; it spread so rapidly and successfully, becoming basic economy of the people, that they hardly remember life without potatoes. Information is very scanty on what was the major cultivation before the potato. However, we may surmise that they must have practised jhum cultivation as do the present people in War and Bhoi. Nowadays, there are no jhum fields in the uplands as there are practically no forests with which to make jhum fields. There must have been a long period of jhum cultivation, which resulted in recent ecological changes in the uplands through the exploitation of the jungle. This hypothesis might be supported by the existence of big timbers in old buildings in the Khasi Hills, as well as by the present economic techniques of the people.

137 244 241

The present potato cultivation is also a kind of drifting cultivation like jhuming, with a rotation from three years to five years. The uplands are covered with grassland, and sometimes with scanty pine trees which were also introduced by the British. For potato cultivation, the Khasi first cut branches from these pine trees, and the grassland is cultivated by the small Khasi hoe. They root out grasses with earth attached about three inches in depth and one foot square. These pieces are turned onto the cultivated surface, where fallen leaves, branches and wild grass have been spread, in such a way as to keep a space between the ground and the turned up clods of earth. The field in which the potatoes are to be planted is entirely covered in this way. The grass and leaves are set on fire in one corner of the field and this fire spreads through the middle spaces and burns all of the grass and branches, thus converting it into excellent manure. The potatoes are planted afterwards. Two crops of potatoes are raised generally in a year. The following year the field is shifted to another grass-growing area, leaving for a few years the last field to grow another crop of grass. This is a type of small-scale jhum cultivation. This example of the present economic method suggests that the Khasi had been jhum cultivators before potatoes were introduced. It might be indicative of the last stage of jhum cultivation when the forests are completely exhausted. Before the potatoes, they must have grown yams, maize and millet more or less in the same manner; these items are still cultivated on a small scale along with potatoes; the yield must be very low as compared with that of the War areas, obtained through the exploitation of land. In the uplands, pan culti-

178 244 [241]

IB: Assam C-3 (1958) 1963 487 Khasi 487

CHAPTER II

General features of the district

1.1 In this chapter a brief note on the geography, population and economy of the district is given in order to provide a perspective and make the report self contained.

1.2 **Relief**—The whole of the district is composed of hill ranges. On the northern and western border these hills take the form of undulating ranges which run for the most part north and south and rise to have a general height of 500 to 6000 thousand feet. None of the hills in the central and southern portions of the district has anything rocky or precipitous about them. Their sides are covered with dark green soil from one direction or another, they are generally to mentioned by a name on Lowerland. There is a high plateau in the centre of the district, the general level of which is not much below 6000 feet though it decreases to height towards east and west.

1.3 **Rivers**—The high plateau that traverses the centre of the district is the watershed of the hills. The following are the principal rivers. On the west there is the Jaintiapur or Kynshi river, further east come the Um Manta and the Sonapil which fall into the Surma. The Umngot or Mahendhali, known as the Piloi Gang in the plains of Nalbari, forms for a considerable distance the boundary of the Khasi and Jaintia Hills. On the north the principal rivers are Kaulpi, the Digaru and Umiam. Further east comes the Umkhen, Um Mawang and the Myntang. All these rivers possess the characteristics usually associated with hill streams. The beds are rocky and gravelly, the currents swift and after heavy rains even small streams rise down in spate. The rivers of the district are not used for traffic to any appreciable extent.

1.4 **Minerals**—The Geological products of economic value are lime and coal. From the earliest days of British rule, the lime quarries of Khasi Hills formed one of the principal attractions of Sylhet, drawing a large number of Europeans to that district. The lime quarries are situated all along the southern face of the hills. Coal is found both in the cretaceous and nummulitic formations. The largest deposits of nummulitic coal are found at Cherrapunjee, Laitryngew, Mawlong, Mawsmai, Mawpyrnam, Mawlai, Thangkaih, Lakadong and Nongah. Cretaceous coal is found in Mawlaitkhar, Sumer, Mapung Laitkynsew and in the Langrin hills.

1.5 **Forests**—The district exhibits a varied flora reflecting the variations in the physical features, configuration of the ground, rainfall factors and climatic gradients. In the plain area, covering areas between 2000-4000' elevation are found the plane, birch, sisham, ash, beech, etc. The evergreen hardwood area, which forms belt along the foothills contains useful hardwood species of which the more important species are sal, sopar, chess, chap, gamari, etc. The dry grassy belt covering the lower slopes roughly between 600-4000' elevation forms the best ground for grasses.

22: Hunter G-4 (no date) 1997 AR? Khasi AR?

175 Khasis, have, ever since the commencement of improvement which
698 followed, remained perennials and consumed.

133 GENERAL ASPECT OF THE DISTRICT.—The District consists almost entirely of hills, only a very small portion lying in the plains. The slope of the hills on the southern side is steep, until a table-land is met with at an elevation of about 4000 feet. Higher up there is another plateau at Mao-flang, the ridge to the eastward of which, and in the same mountain range, the Civil Station of Shillong is situated at an elevation of 6000 feet above sea level. On the northern side of the hills are two plateaux, one between 1000 and 2000 feet below the level of Shillong, and the second lower down, about 3000 feet above sea level. In general features all these plateaux are much alike, and consist of a succession of undulating downs, broken
137 here and there by the valleys of the larger hill streams. In the higher ranges, where the hills have been denuded of forest, the country is covered with short grass, which becomes longer and
[718] more rank in the lower elevations. A remarkable feature in the aspect of the country throughout the hills is the numerous sacred groves which superstition has preserved from time immemorial from the destructive hand of the woodcutter. These sacred groves contain beautiful timber-trees of various kinds, rare orchids, rhododendrons, and wild cinnamon. On the more elevated table-lands, pine trees and stunted oak are met with; and in the lower hills, in every direction, are dense forests of the usual Indian trees, containing valuable timber.

134 The geological formation is mainly granite, with stratified rocks
135 of sandstone, limestone, and shale. The coal-beds rest on trap and metamorphic rocks. The prevailing surface soil is a red ferruginous loam.

133 MOUNTAINS.—The principal mountain ranges and highest peaks in the Khasi and Jaintia Hills are as follow:—(1) The Shillong range—height of principal peak, 6,442 feet above sea level. (2) Diengei range—principal peak, 6,400 feet. (3) Mao-flang-Shillong range—highest peak, 6,050 feet. (4) Lum-ym-kiñ range—highest peak, 5,005 feet. (5) Lum-sohpet-bneng range—highest peak, 5,313 feet. (6) Lum-ber-kiñ—highest peak, 5,200 feet. (7) Lum-bah range—highest peak, 4,280 feet. (8) Lyng-kor-thoh range—highest peak, 5,000 feet. (9) Lum-laitang range—highest peak, 4,898 feet. (10) Mao-ym-rim range—highest peak, 5,800 feet.

The principal mountains are:—(1) Sap-lang—height, 5,631 feet.

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(2) Sah-pet-hyrung, literally "The Navel of the Sky." This is supposed by the Khásis to be the centre of the world, and to be the highest peak in the hills. Its real altitude, however, is only about 5000 feet. (3) Nyuse—height, 6050 feet. (4) Shillong—height, 6449 feet. (5) Diengiei—height, 6400 feet. (6) Kyllang rock, one huge mass of stone, about 300 feet high, and of a rounded form—height above sea level, 5685 feet. (7) Lúr-lúh—height, 5800 feet. (8) Lúr-kmié—height, 6000 feet. (9) Thangi-mihi—height, 6228 feet. (10) Nong-pung—height, 4599 feet. (11) U Mlúr—height, 6001 feet. (12) Mlúr-lung—height, 5132 feet. (13) Mlúr-kú-lung—height, 5300 feet. (14) Mlúr-pyn-nai—height, 5800 feet. (15) Symper—height, 5700 feet. (16) Mlúr-ongi—height, 5800 feet. (17) Lúr-múr-kún—height, 5513 feet. (18) Nong-ram-mih—height, 5585 feet. (19) Mlúr-kyrn—height, 5308 feet. (20) Nong-khmong—height, 5608 feet. (21) Kuhi-long-ngain—height, 5108. (22) Mlúr-kúh—height, 4050 feet. (23) Pator-kyl-lang—height, 5733 feet.

The mountain peaks are of various forms and shapes, but generally conical, and capped by sacred groves. No roads exist to permit the ascent of carriages, but most of the hills can be ascended by bands of hunters, even without made tracks. In the autumn portion of the Divorce the hills are covered with flowers.

RIVERS.—Six navigable rivers flow through the hills, the streams being all mountain torrents. On some of the large streams, however, near the point where they debouch upon the plains, small canoes are used for short distances below the rapids. The principal streams flowing south to the Surmá river in Sylhet are the following:—(1) The Kynchi-ang, named Jádukátá by the Bengális in the plains; (2) the Tangli, called Mahú in the plains; (3) the Digrah, called Singkyáng in the plains; (4) the Sah-rung-kaw, called Dhalái in the plains; (5) the Mungli, called Pein in the plains; (6) the Mlúr-kyh-dia, called Hábí in the plains; and (7) the Lukái or Lubá. The principal tributaries to the Brahmaputra are:—(1) The Kapili; (2) the Um-khun, called Jamjúri in the plains; (3) the Um-sin; (4) the Um-ru, called Digru in the plains; and (5) the Kn-khri, called Kalái in the plains. All the foregoing streams have numerous feeders of their own, but none of them are of any importance.

The Khási and Jáintá Hills are, like all mountainous countries, extremely watered, and the streams run over rocky beds, sometimes passing through cultivated lands. As they approach the plains,

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In former years the Khasis were great iron-smelters, and enormous excavations in the most favourable localities for obtaining ironstone prove the extent to which this manufacture was carried on. In some places the whole surface of the ground appears to have been dug up for a depth of several feet, leaving huge boulders standing up here and there. Of late years, however, as the price of labour in the Hills has risen, the trade in iron has died away, and there is now little demand for the Khási article, the cheaper English metal having driven it out of the market. 178 316 325

Natural Features.—Many peculiar caves and caverns are found in the limestone rock formation, the most notable being the caves at Chorá Pinji and at Bájendh in Amwi. At the latter place the caverns extend a great distance beneath the earth, one being imagined by the people to reach as far as China, and a Hindu legend states that a Chinese army once marched by this route to the invasion of India. In another cave, the limestone stalactites have been carved into images representing the gods of the Hindu pantheon. On the banks of the Kapili river on the Cáchár border, at a place called Sumir, there is a hot spring, the water of which contains carbonate of lime. All the rivers in the Hills flow through gorges in certain parts of their course, the most picturesque being at Tehrá, where a small stream is compressed into deep pools among limestone rocks; and at Dumung and Jinghás, where the Mangoi and Mamiáin rivers respectively debouch upon the plains. 133 [323]

Forests, etc.—The India-rubber or caoutchouc tree is found in many forests throughout the Hills, but not in great numbers, and the supply and value of the gum has much decreased of late years. In 1870 the right of tapping the trees in the Jáintiá Hills was leased out for a sum of £38, 10s. od.; but by 1878 the trade had almost entirely ceased. There are some tracts of timber forest on the lower hills towards the Brahmaputra valley, but through the want of water carriage they are of no great value. Vigorous efforts are being made to preserve the forests in the higher plateaux. Owing to the habit of firing the jungle in spring prior to sowing, great waste of valuable timber has taken place; but since the country has been separated from Bengal and placed under the administration of the Chief Commissioner of Assam, attention has been given to the matter, and special areas are now being set apart for the preservation and growth of forest timber. Cinnamon grows wild in some parts of the country. There is a considerable trade carried on in 137 [314] 137 648 659 000

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There is considerable trade carried on in
245 439 *nápit* or bay leaves, the trees being extensively cultivated by the inhabitants of the lower slopes of the hills on the Sylhet border. The finest oranges in India are also grown in groves in the same tract, the value of the trade in which is now (1876) estimated to amount 237 to £3760 per annum. Lac is gathered by the Mikirs in the Jáintiá 439 Hills, but not to any great extent. Bees are both domesticated 231 and found wild, and an extensive trade in bees-wax is carried on, the amount exported being estimated at from three hundred to four hundred *maunds* annually. The whole of the Hills, where there is 233 no forest, and where the land is not under cultivation, consists of 621 rich pasture grounds, which are held in common by the villagers 651 and pay no revenue to Government.

• 137 The forests of the Khási and Jáintiá Hills do not yield much profit either to the British Government or to the chiefs. There [648] are no reserved forests in the District; and according to the Deputy-[659] Conservator, the total area of unreserved forest, *i.e.* of land covered with timber trees and not at present required for *júm* cultivation, is only 150 square miles. The trees found are chiefly pine, and those classified as 'mixed upper hill forests.' At an elevation of 3000 feet, the Pinus Kasia predominates over all other vegetation and forms almost pure pine forests. It is found also at lower heights, and there attains larger dimensions, but only in the case of isolated trees. The 'mixed upper hill forests' are confined to a series of sacred groves, which clothe the topmost ridge of the watershed between the valleys of the Brahmaputra and Surmá. The characteristic trees are those of a temperate vegetation, chiefly consisting of oaks, chestnuts, magnolia, Schima, Cinnamomum, Prunus, Engelhardtia, etc. There are also numerous other timber trees, including the valuable *sál* (Shorea robusta) and the rubber tree (Ficus elastica); but on the whole the Khási Hills are remarkable for the [648] absence of forest. Early in 1874-75 measures were taken to put a [659] stop to the indiscriminate burning of the forests, and the Siems and village officers were made responsible for the conservancy of the sacred groves. These endeavours have met with some success; but it is a very difficult thing to change the habits of a population, or to induce uncivilised tribes to incur a small temporary inconvenience for the sake of future benefit. The total area directly protected from fire during the year 1875-76 is returned at 3618 acres; the expenditure was Rs. 122; and in ten prosecutions for breaches of forest rules, twenty-three persons were convicted.

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The forest administration of the British Government is confined to two plantations in the neighbourhood of Shillong, for which a rent is payable in perpetuity. One of these, on the farther side of the Umiam, was originally acquired in 1871-72 for the sake of experiments in arboriculture. The rent of Rs. 30, or £3, is paid by the Forest Department; the area had been at first estimated at 580 acres, but an actual survey undertaken in 1873-76 reduced this estimate to 260·39 acres. A considerable portion is covered with *Pinus Kasia*, which is carefully protected. Of the exotic trees tried on this plantation, only the three following can be said to have done well: *Juglans regia*, *Eucalyptus resinifera*, and *Pinus maritima*. All the rest either suffered from frost in the winter, or required far more nursing than can be afforded them in forest plantations. The young trees of the indigenous oak (*Quercus serrata*) were also attacked by rats, who bit off great numbers just above the ground. The Spanish chestnuts did not thrive, and were removed to the model farm for trial at a higher elevation. The second plantation, on the northern slopes of the range immediately behind the Station, consists of several patches of forest, which were acquired in connection with the scheme for providing Shillong with a permanent water supply. The total rent is Rs. 375, or £37. 10s., paid from Town Improvement Funds; and the aggregate area is estimated at 796 acres. All the fields within this area that had formerly been cultivated by the Khásis—about 80 acres in all—were sown by the Forest Department with *Pinus Kasia*, *Quercus Griffithii*, *Q. serrata*, and *Q. fenestrata*, which have succeeded well; and about 8 acres were planted with different species of *Eucalyptus*. Up to the close of 1875-76 the sum expended on the first of these two plantations was Rs. 742. 9. 9, or £74. 5s. 3d., and on the second, Rs. 730. 9. 6, or £73. 1s. 2d.

A cinchona plantation was started in 1867 by the Superintendent of the Calcutta Botanical Gardens. It consists of twelve small patches of plants near Nongklao, and one near Jirang, situated at elevations varying from 3500 feet to 5000 feet. The species cultivated are *Cinchona succirubra*, *C. officinalis*, and *C. micrantha*. At first they were under the charge of two Khási gardeners, who each received Rs. 16 a month, or £19. 4s. a year, to weed them and keep fires out. In 1874-75 these plantations were taken charge of by the Forest Department, and specimens of the cinchona bark were submitted for analysis to the Government Quinologist